

CLAIMS

1. Plastic medium feed-through part, for example a spout, designed to be sealed by means of a sealing technique between film walls of a bag, comprising a plastic body which forms a channel for dispensing a medium from the bag and/or feeding it to the bag, which body has sealing sides situated opposite each other, each for achieving a sealed connection to an adjoining film wall, which sealing sides are substantially flat and free from ribs, characterized in that each sealing side has a rough surface structure, preferably over the entire surface of each sealing side, a strip along the free edge of each sealing side possibly not having a rough surface structure, so that no sealed connection is achieved there.
2. Medium feed-through part according to claim 1, in which the surface roughness value of the sealing sides lies between 20 and 40 in accordance with VDI Richtlinie 3400.
3. Medium feed-through part according to claim 2, in which the surface roughness value of the sealing sides lies between 23 and 35 in accordance with VDI Richtlinie 3400.
4. Medium feed-through part according to claim 3, in which the surface roughness value of the sealing sides lies between 26 and 34 in accordance with VDI Richtlinie 3400.
5. Medium feed-through part according to one or more of the preceding claims, in which the body has a transverse wall with an opening in it which forms part of the channel, and also with sealing walls which project at an angle from the transverse wall and are substantially symmetrical relative to a plane of symmetry substantially perpendicular to the transverse wall.
6. Medium feed-through part according to claim 5, in which the sealing walls are at the greatest distance from each other

in a central area and are connected to each other in end areas situated in the corresponding plane of symmetry.

7. Medium feed-through part according to one or more of the preceding claims, in which the body has a tubular element which forms part of the channel.

8. Medium feed-through part according to claims 5 and 7, in which the tubular element extends from the side of the transverse wall facing away from the sealing walls.

9. Bag provided with a medium feed-through part according to one or more of the preceding claims.

10. Mould for injection moulding a medium feed-through part according to one or more of the preceding claims, in which the mould has a mould cavity with wall parts which define the sealing sides of the body and in the case of which the wall parts concerned are provided with a rough surface structure, for example obtained by a suitable electrical discharge machining operation.

11. Method for sealing a plastic medium feed-through part according to one or more of the preceding claims between film walls of a bag, in which use is made of a sealing device provided with sealing elements disposed opposite each other and each having a sealing face by means of which the sealing bar is pressed against the film wall, so that the film wall adheres to the medium feed-through part, characterized in that the sealing faces are substantially flat, so that the rough surface structure of the sealing walls at least partially disappears during the sealing, and a flat unit is preferably obtained.

12. Plastic medium feed-through part, for example a spout, designed to be sealed by means of a sealing technique between film walls of a bag, comprising a body which forms a channel

for dispensing a medium from the bag and/or feeding it to the bag, which body has a transverse wall with a first side and a second side situated opposite said first side, and which wall has in it an opening which forms part of the channel, which  
5 body further has sealing walls projecting at an angle from the second side of the transverse wall, which sealing walls each have a sealing side for the purpose of forming a sealed connection to an adjoining film wall, which sealing walls are substantially symmetrical relative to a plane of symmetry  
10 substantially perpendicular to the transverse wall and are at the greatest distance from each other in a central area and are connected to each other in end areas situated in the corresponding plane of symmetry, so that the sealing walls bound a space between them, characterized in that furthermore  
15 from the second side of the transverse wall on either side of the opening in the transverse wall an anti-nesting projection projects in each case into the space between the sealing walls, and in that a free passage is present between each of the anti-nesting projections and each adjacent sealing wall,  
20 in such a way that said sealing wall is movable flexibly towards the other sealing wall, thereby reducing said free passage.

13. Medium feed-through part according to claim 12, in which  
25 a reinforcement rib, lying substantially in the plane of symmetry and integral with the transverse wall, is present in the area between each anti-nesting projection and the adjacent interconnected end areas of the sealing walls.

30 14. Medium feed-through part according to claim 13, in which the reinforcement rib is substantially L-shaped with a leg substantially at right angles to the second side of the transverse wall and integral with an anti-nesting projection, and with another leg substantially along the second side of  
35 the transverse wall.

15. Medium feed-through part according to one or more of the preceding claims 12 - 14, in which each anti-nesting projection in cross section parallel to the transverse wall forms a segment of a ring.
- 5
16. Medium feed-through part according to claim 15, in which each anti-nesting projection in cross section forms a segment of a circular ring.
- 10
17. Medium feed-through part according to claim 15 or 16, in which each anti-nesting projection directly adjoins the opening in the transverse wall.
18. Medium feed-through part according to one or more of claims 12 - 17, in which the body further has a tubular element extending from the first side of the transverse wall, the channel being at least partially formed by the opening in the transverse wall and the tubular element connecting to it.
- 15
19. Bag provided with a medium feed-through part according to one or more of the preceding claims 12 - 18.
- 20
20. Method for sealing between film walls of a bag a plastic medium feed-through part, for example a spout, comprising a plastic body which forms a channel for dispensing a medium from the bag and/or feeding it to the bag, which body has sealing sides situated opposite each other, each for achieving a sealed connection to an adjoining film wall, which sealing sides are substantially flat and free from ribs, use being made of a sealing device provided with sealing elements disposed opposite each other and each having a sealing face with which the sealing element is pressed against the film wall, so that the film wall adheres to the medium feed-through part, characterized in that the sealing faces of the sealing elements have a rough or structured surface structure.
- 25
- 30
- 35

21. Method for sealing between film walls of a bag a plastic medium feed-through part, for example a spout, comprising a plastic body which forms a channel for dispensing a medium from the bag and/or feeding it to the bag, which body has a transverse wall with an outermost edge and sealing sides situated opposite each other which connect to the outermost edge of the transverse wall, each sealing side for achieving a sealed connection to an adjoining film wall, which sealing sides are preferably substantially flat and free from ribs, use being made of a sealing device provided with sealing elements disposed opposite each other and each having a sealing face with which the sealing element is pressed against the film wall, so that the film wall adheres to the medium feed-through part, characterized in that the sealing elements each have on the side facing the sealing element situated opposite an overhanging rib, which rib rests on top of the outermost edge area of the transverse wall during the sealing, so that melting plastic material is prevented from running out between the film wall and the feed-through part in the region of that outermost edge.

22. Method for sealing between film walls of a bag a plastic medium feed-through part, for example a spout, comprising a plastic body which forms a channel for dispensing a medium from the bag and/or feeding it to the bag, which body has a transverse wall with an outermost edge and sealing sides situated opposite each other which connect to the outermost edge of the transverse wall, each sealing side serving to achieve a sealed connection to an adjoining film wall, which sealing sides are preferably substantially flat and free from ribs, use being made of a sealing device provided with sealing elements disposed opposite each other and each having a sealing face with which the sealing element is pressed against the film wall, so that the film wall adheres to the medium feed-through part, characterized in that the sealing faces are provided with one or more recesses, in such a way that at the position of a recess little - or possibly no - excessive or

unequal pressure is exerted by a sealing element upon the film wall and the medium feed-through part.

23. Method according to claim 22, in which at each of the merging end areas of the sealing sides the medium feed-through part is provided with an outwardly projecting flap, which flap also ultimately lies between the film walls, and in which the sealing faces of the sealing elements are provided with a recess at the level of each flap.

10

24. Method according to claim 23, in which the bag is a side-gusset bag having on each side a part of each film wall folded inwards, so that a fourfold film wall thickness is present there, and a central part formed by two film walls, the medium feed-through part being placed in the central part, and the sealing faces of the sealing elements situated opposite each other being of a recessed design in the area of the fourfold wall thickness, in order to compensate for the film wall thickness relative to the central part.

20

25. Plastic medium feed-through part, for example a spout, designed to be sealed by means of a sealing technique between film walls of a bag, comprising a plastic body which forms a channel for dispensing a medium from the bag and/or feeding it to the bag, which body has sealing sides situated opposite each other, each for achieving a sealed connection to an adjoining film wall, characterized in that the medium feed-through part is provided with an element for holding the bag open, which element projects below the sealing sides, preferably substantially in line with the channel.

30

26. Plastic medium feed-through part according to claim 25 and claim 12, in which the element for holding the bag open is formed by one or more of the anti-nesting projections.

35

27. Plastic medium feed-through part according to claim 25, in which the element for holding the bag open is tubular, so that its interior is in communication with the channel.

5 28. Plastic medium feed-through part, for example a spout, designed to be sealed by means of a sealing technique between film walls of a bag, comprising a body which forms a channel for dispensing a medium from the bag and/or feeding it to the bag, which body has a transverse wall with a first side and a  
10 second side situated opposite said first side, and which wall has in it an opening which forms part of the channel, which body further has sealing walls projecting at an angle from the second side of the transverse wall, which sealing walls each have a sealing side for the purpose of forming a sealed  
15 connection to an adjoining film wall, which sealing walls are substantially symmetrical relative to a plane of symmetry substantially perpendicular to the transverse wall and are at the greatest distance from each other in a central area and are connected to each other in end areas situated in the  
20 corresponding plane of symmetry, so that the sealing walls bound a space between them, the transverse wall having a central part and also on either side of said central part in each case one outermost end, each outermost end near the merging end areas of the sealing walls, characterized in that  
25 the outermost ends of the transverse wall, viewed in the direction from the free edge of sealing walls towards the transverse wall, lie lower down than the central part of the transverse wall.

30 29. Medium feed-through part according to claim 28, in which the transverse wall has between the central part and each outermost end a shoulder part sloping off towards the outermost end.